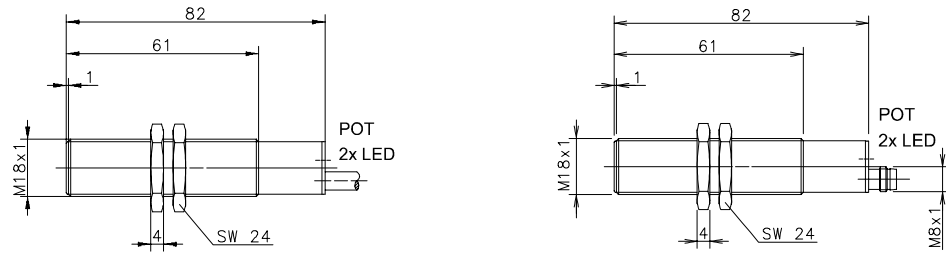


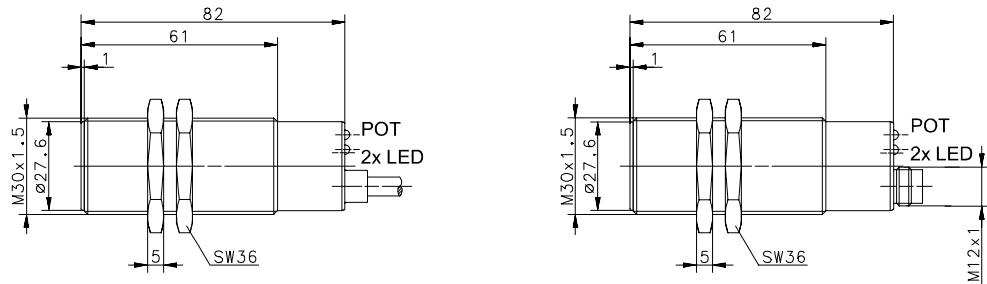
# Technical Data

## Capacitive Proximity Switch

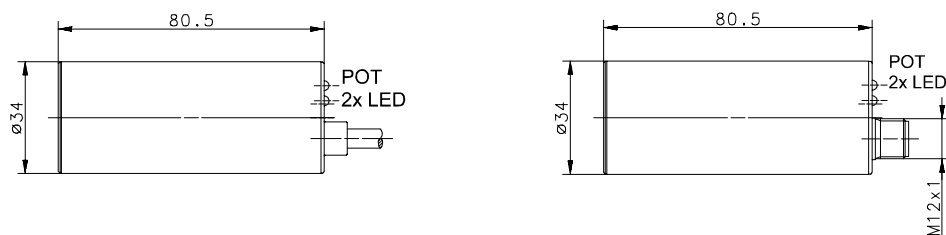
### Series M18, M30 and Ø34 flush - DC



Mounting flush	Type M18x1 Enclosure: Brass			
	2m cable		M8 male plug	
S <sub>n</sub>	5mm			
S <sub>r</sub>	1-5mm			
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507305001	6507105001	6507305004	6507105004
PNP	6507905001	6507705001	6507905004	6507705004



Mounting non flush	Type M30x1,5 Enclosure: Brass			
	2m cable		M12 male plug	
S <sub>n</sub>	10mm			
S <sub>r</sub>	2-10mm			
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507307001	6507107001	6507307004	6507107004
PNP	6507907001	6507707001	6507907004	6507707004



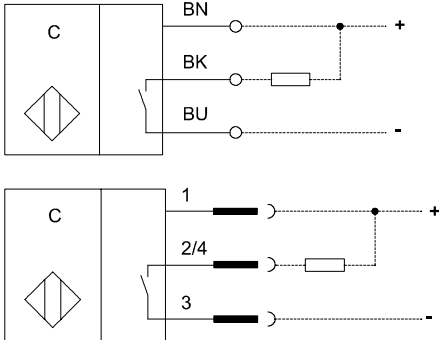
Mounting flush	Type Ø34 Enclosure: Brass			
	2m cable		M12 male plug	
S <sub>n</sub>	20mm			
S <sub>r</sub>	5-20mm			
Output	N.O.	N.C.	N.O.	N.C.
PNP	6507915005		6507915006	

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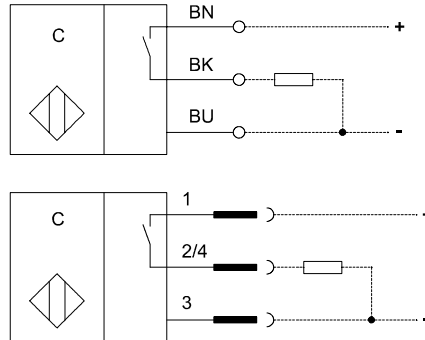
Date of issue: 03.05.2005 / Page 1 of 3  
 Document : 7100012\_en / Last update: 3 / 0308-05

### Wiring diagrams NPN and PNP normally open / N.O.

NPN – Proximity Switch

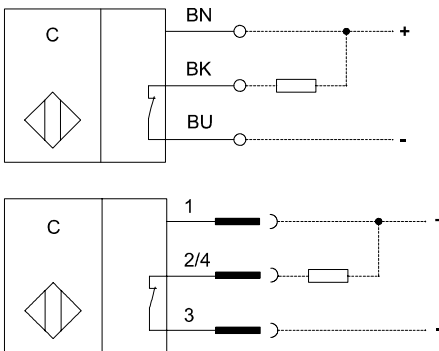


PNP - Proximity Switch

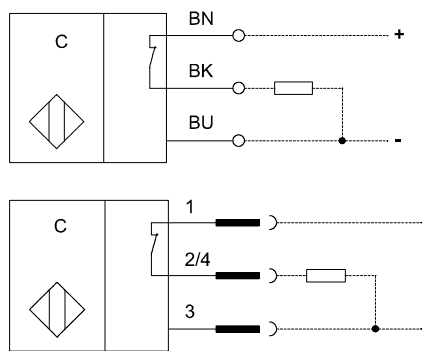


### Wiring diagrams NPN and PNP normally closed / N.C.

NPN – Proximity Switch

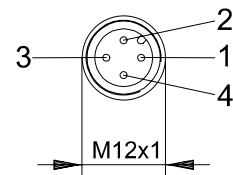
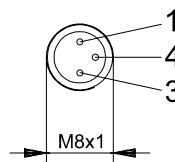


PNP - Proximity Switch



### Male plug M8x1 / M12x1 and corresponding colours

pin number	colour	code
1	brown	BN
2	-	-
3	blue	BU
4	black	BK



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# Technical Data

## Capacitive Proximity Switch

### Identifying characteristics in accordance with EN 60947-5-2

Electrical data		
Rated operating distance	$S_n$	see overview
Mounting		flush
Standard target		M18x1 = 18x18x1mm; M30x1,5 = 30x30x1mm; Ø34 = 60x60x1mm material: steel
Effective operating distance	$S_r$	see overview $S_r$ adjustable with potentiometer (POT); turn right $\hat{=}$ high sensitivity, turn left $\hat{=}$ low sensitivity
Assured operating distance	$S_a$	$0 \leq S_a \leq 0,8 \cdot S_r$
Switching element function		see overview
Repeat accuracy	R	$\leq 0,1 \cdot S_r$
Differential travel (hysteresis)	H	$\leq 0,2 \cdot S_r$
Frequency of operating cycles	f	$\approx 25\text{Hz}$
Rate doperational voltage	$U_e$	12V - 48V DC ( Ø34 = 12 – 24V DC )
Operational voltage range	$U_B$	10V - 60V DC ( Ø34 = 10 – 36V DC )
Rated insulation voltage	$U_i$	75V DC
Rated impulse withstand voltage	$U_{imp}$	500V
Voltage drop	$U_d$	M18x1 $\leq 2\text{V DC}$ ; M30x1,5 $\leq 3\text{V DC}$ ; Ø34 $\leq 1,5\text{V DC}$ ( @ max. $I_e$ )
Utilization category		DC-13(Switching element)
Rated operational current	$I_e$	$\leq 200\text{mA DC}$ @ M18x1 and Ø34 $\leq 400\text{mA DC}$ @ M30x1,5
Minimum operational current	$I_m$	$\geq 1\text{mA DC}$
Off-state current	$I_r$	$\leq 0,5\text{mA DC}$
No-load supply current	$I_o$	$\leq 20\text{mA DC}$
Switching element		permanent overload and s.c.p.
Short-circuit protection		pulsed
Rated conditional short-circuit current		100A
Rated supply frequency		DC
False polarity protection		with permutation of +, -, output no damage occurs
Time delay before availability	$t_v$	$\leq 50\text{ms}$

Elektromagnetische Verträglichkeit (EMV)		
Hochfrequenzbeeinflussungsfestigkeit	IEC 61000-4-3	3V/m, 80...1000MHz
Elektrostatische Entladungsfestigkeit	IEC 61000-4-2	4kV CD
Schnelle Transientenfestigkeit (Burst)	IEC 61000-4-4	1kV coupling clamp
Stoßspannungsfestigkeit (Surge)	IEC 61000-4-5	500V, 1,2/50µs @ $R_i = 42\Omega$
Störaussendung	EN 55011	$\leq 40\text{dB}$ (µV/m)

Mechanical Data	
Enclosure	Brass, nickel plated
Front cap	PTFE
End cap	PA 6.6 black
Ambient air temperature	-25°C ... +70°C (Ø34: -15°C ... +50°C )
Type of protection	M30x1 and Ø34 = IP67 (NEMA 4) ( Male plug version: only with screwed plug-in-connector ) M18x1 = IP65 (NEMA12)
Pollution degree	3 (Pollution of the active zone can cause impairments of the operating distances.)
Indication	Power ON = LED green Output ON = LED yellow
Termination type	Cable 3x0,5mm <sup>2</sup> x 2m, PVC-outer jacket black Male plug M8x1, brass, nickel plated @ M18x1 Male plug M12x1, PA @ M30x1,5 Male plug M12x1, brass, nickel plated @ Ø34
For attachment	M18x1 und M30x1,5 = hexagon nut; brass, nickel plated

EU Conformity	CE
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